Krešimirova 40/42 • 51000 Rijeka • CROATIA
Phone : + 385 51 559 200; 559 202, 559 203

Course: Gnathology
Course Coordinator: Renata Gržić, DMD, PhD, Full Professor
Department: Department of Prosthodontics
Study program: University Integrated Undergraduate and Graduate Study of Dental Medicine (in English)
Study year: 4.
Academic year: 2024./25.

SYLLABUS

Course description (a brief description of the course, general instructions, where and in what form the lessons are organized, necessary equipment, instructions for attendance and preparation for classes, student obligations, etc.):

Course leader:

Renata Gržić, DMD, PhD, Full Professor
Faculty of Dental Medicine, University of Rijeka
Department of dental prosthodontics
Krešimirova 40/42
Consultation time: according to agreement
Phone: 345-633
e-mail: renata.grzic@medri.uniri.hr
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Associates:

Petra Tariba Knežević, DMD, PhD, Assistant Professor
Department of dental prosthodontics
Krešimirova 40/42
e-mail:petra.tariba@fdmri.uniri.hr

Ana Domitrović, DMD
Department of dental prosthodontics
Krešimirova 40/42
e-mail:ana.domitrovic@uniri.hr

Assigned reading:

1.Okeson. Management of Temporomandibular Disorders and Occlusion, 8th Edition

Optional/additional reading:

1.McNeill C. Science and Practice of Occlusion, Quintessence Publishing Co., Inc Chicago 1997.
2.Celenza PV. Occlusal Morphology, Quintessence Publishing Co., Inc 1980.
3.Lundeen HC. Introduction Occlusal Anatomy, Kentucky, Lexington 1969.

COURSE TEACHING PLAN:

The list of lectures (with topics and descriptions):

P1 Introduction to the definition and history of occlusion - gnathology
Learning outcomes:
Describe the development and purpose of gnathology.

P2 Functional anatomy of the stomatognathic system
Learning outcomes:
Describe the components of the stomatognathic system.
Distinguish their parts and function.

P3 Functional anatomy
Learning outcomes:
Define the components of tmz and compare them with each other.

P4 Neurophysiology of the stomatognathic system
Learning outcomes:
Analyze the neurophysiology of the stomatognathic system.

P5 Position of teeth and occlusion
Learning outcomes:
Describe the position of the teeth in the jaw, define classes according to Angle.
Compare concepts of occlusion and define occlusal curves.

P6 Position and movements of the lower jaw
Learning outcomes:
Describe the positions of the jaws, compare the differences between them.
Define jaw movements.

P7 Registration of the position and movements of the lower jaw - hinge axis
Learning outcomes:
Describe the positions and movements of the lower jaw and the device for their registration.

P8 Geometry of occlusion and concepts of occlusion
Learning outcomes:
Analyze the geometry of occlusion and define concepts of occlusion and their application in the stomatognathic system.

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P9 Articulators, accessories and technique
Learning outcomes:
To compare the types of articulators, cheek bows and the existing equipment and technique required for their use.

P10 Functional disorders of the stomatognathic system
Learning outcomes:
Define functional disorders of the stomatognathic system, symptomatology, division and classification.

P11 Clinical analysis of functional disorders of the stomatognathic system
Learning outcomes:
Differentiate between different clinical procedures for diagnosing functional disorders of the stomatognathic system.

P12 Instrumental analysis of functional disorders of the stomatognathic system
Learning outcomes:
Distinguish instrumental procedures for the analysis of functional disorders of the stomatognathic system.

P13 Basics of functional disorders therapy
Learning outcomes:
Argue various therapeutic procedures for the treatment of functional disorders and describe the advantages and disadvantages of individual procedures.

P14 Solving cases from clinical practice
Learning outcomes:
Compare different cases and try to solve them (diagnosis, therapy).

The list of seminars with descriptions:

S1 Functions of the masticatory system
Learning outcomes:
Describe the basic masticatory functions (chewing, swallowing, speaking).

S2 Determinants of occlusal morphology
Learning outcomes:
Distinguish the occlusal morphology on the teeth and define the components and their purpose.
Explain the types of nodules and their function.

S3 Mechanism of orofacial pain
Learning outcomes:
Describe the mechanism of orofacial pain with an emphasis on the neurological component.
Describe the types of pain and how it occurs.

S4 DC/TMD as dg. criterion of TMD
Learning outcomes:

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Define the DC/TMD protocol, purpose, use, goal and method of application.

S5 Bruxism – signs and disorder
Learning outcomes:
Describe bruxism - symptomatology, clinical picture, mode of occurrence, types of bruxism and therapy.

S6 Headaches
Learning outcomes:
Define the types of headaches, the way they occur, the connection with TMP and therapy.

S7 Orthodontic anomalies and TMD
Learning outcomes:
To describe what types of orthodontic anomalies and to what extent they are related to the occurrence of TMP and whether this type exists at all with an emphasis on recent developments from the scientific literature.

S8 Corrosive splints
Learning outcomes:
Define caustic splints, types, indications, goal of therapy and how and to what extent they help with TMP.

S9 Physical th
Learning outcomes:
Describe the different modalities of physical therapy and the indication for their use.

S10 Depression and TMD
Learning outcomes:
Define depression and whether and to what extent it is related to TMP (cause and effect relationship).

S11 Parafunctions in children
Learning outcomes:
Describe parafunctions and their manifestation and clinical picture in children.

S12 Implantology
Learning outcomes:
Define implant-prosthetic therapy and its application in TMP patients.

S13 Prevention of injuries in sports
Learning outcomes:
Differentiate between ways of protecting the stomatognathic system from injuries in sports.

S 14 Clinical case presentations
Learning outcomes:
Recapitulation through presentation of clinical cases.

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The list of practicals with descriptions:

V1 Medical History taking in TMD patients
Learning outcomes:
Define anamnestic procedures performed in patients with TMD.

V2 Clinical examination of TMD patients
Learning outcomes:
Perform a complete clinical examination of TMP patients.

V3 Radiological evaluation of TMD patients
Learning outcomes:
To compare different radiological techniques that help us in the diagnosis of TMP and to distinguish when and why certain techniques should be applied in a certain patient and why.

V4 Evaluation of the condition of the occlusal complex
Learning outcomes:
Describe and diagnose the state of the occlusal complex. To compare different occlusal markers used to evaluate the state of the occlusal complex.

V5 Analysis of interjaw relationships - finding reference positions of the mandible
Learning outcomes:
Analyze all positions of the mandible and find relevant positions and bring the patient into them using various techniques and aids.

V6 Analysis of the contact relationship of the teeth in the central position of the mandible
Learning outcomes:
Bring the patient to the central position and analyze the contact relationship of the teeth in that same position.

V7 Analysis of occlusal relations in the intercuspidation position of the mandible
Learning outcomes:
Bring the patient into the intercuspidation position and analyze the contact relationship of the teeth in that same position.

V8 Analysis of occlusal relations during eccentric movements of the mandible
Learning outcomes:
Define eccentric positions and bring the patient into these positions and analyze the values of these movements.

V9 Taking impressions for studio models and casting in plaster
Learning outcomes:
Make anatomical impressions and then cast in plaster.

V10 Determining the intercondylar hinge axis and molding the molded models into the articulator

Learning outcomes:
Describe the determination of the intercondylar hinge axis and sculpt the included models into the articulator.

V11 Anterior and posterior guidance, wax registration, condyle track adjustment, protrusion registration
Learning outcomes:
Distinguish between front and rear guidance. Make wax registers, protrusion registers, adjust the condylar path.

V12 Laterotrusion registration, Bennett movement and angle, articulator adjustment
Learning outcomes:
Make laterotrusion registrations, determine Bennett's angle and individualize the articulator.

V13 Solving practical cases
Learning outcomes:
Recapitulation through the presentation of cases from clinical practice.

V 14 Clinical case report
Learning outcomes:
Describe a complete functional analysis in TMP patients.

V 15 Practical exam

Students' obligations:

The student is obliged to participate in the activities provided by the course plan and program.

Assessment (exams, description of written / oral / practical exam, the scoring criteria):

According to the regulations on studies of the University of Rijeka, a student can obtain 50% of the grade during classes, and the other 50% of the grade is obtained on the final exam.

Gradeing:
-Presence at classes and active participation 10 points
- Written colloquium passed - 40 points
-Final exam - 50 points

In order to take the final exam, he must achieve a minimum of 50% of the grade points during classes. The final exam is in practical and written form. The practical exam is not graded.

In order for a student to be evaluated with a final grade, he must successfully pass the final exam. If he does not pass the final exam, he will receive a negative grade overall. The student has the right to take

the next exam period.

Final grade:
0-49.9% insufficient 1 F
50-59.9% sufficient 2 D
60-74.9% good 3C
75-89.9% very good 4 B
90-100% excellent 5 A

Other important information regarding to the course:

Any use of another's text or other form of author's work, as well as the use of ChatGPT or any of another tool whose functionality is based on artificial intelligence technology, without clear and unambiguous citation of sources, is considered a violation of someone else's copyright and the principle of academic integrity and represents serious violation of student obligations, which entails disciplinary responsibility and disciplinary measures accordingly Rulebook on disciplinary responsibility of students.
Consultation time: according to agreement

COURSE SCHEDULE (for the academic year 2024/2025)

Datum	Predavanja (vrijeme i mjesto)	Seminari (vrijeme i mjesto)	Vježbe (vrijeme i mjesto)	Nastavnik
04.10.2024.	P 1 (9.30-10.15) Krešimirova 40	S 1 (10.15-11.00)		Petra Tariba Knežević, DMD, PhD, Assistant Professor Renata Gržić, DMD, PhD, Full Professor
11.10.2024.			V 1e (8.00-8.45) Krešimirova 40	Ana Domitrović, DMD
11.10.2024.			V 1f (8.45-9.30) Krešimirova 40	Ana Domitrović, DMD
11.10.2024.	P 2 (9.30-10.15) Krešimirova 40	S 2 (10.15-11.00)		Petra Tariba Knežević, DMD, PhD, Assistant Professor Renata Gržić, DMD, PhD, Full Professor
18.10.2024.			V 2e (8.00-8.45) Krešimirova 40	Ana Domitrović, DMD
18.10.2024.			V 2f (8.45-9.30) Krešimirova 40	Ana Domitrović, DMD
18.10.2024.	P 3 (9.30-10.15) Krešimirova 40	S 3 (10.15-11.00)		Petra Tariba Knežević, DMD, PhD, Assistant

				Professor Renata Gržić, DMD, PhD, Full Professor
25.10.2024.			V 3e (8.00-8.45) Krešimirova 40	Ana Domitrović, DMD
25.10.2024.			V 3f (8.45-9.30) Krešimirova 40	Ana Domitrović, DMD
25.10.2024.	P 4 (9.30-10.15) Krešimirova 40	S 4 (10.15-11.00)		Petra Tariba Knežević, DMD, PhD, Assistant Professor Renata Gržić, DMD, PhD, Full Professor
08.11.2024.			V 4e (8.00-8.45) Krešimirova 40	Ana Domitrović, DMD
08.11.2024.			V 4f (8.45-9.30) Krešimirova 40	Ana Domitrović, DMD
08.11.2024.	P 5 (9.30-10.15) Krešimirova 40	S 5 (10.15-11.00)		Petra Tariba Knežević, DMD, PhD, Assistant Professor Renata Gržić, DMD, PhD, Full Professor
15.11.2024.			V 5e (8.00-8.45) Krešimirova 40	Ana Domitrović, DMD
15.11.2024.			V 5f (8.45-9.30) Krešimirova 40	Ana Domitrović, DMD
15.11.2024.	P 6 (9.30-10.15) Krešimirova 40	S 6 (10.15-11.00)		Petra Tariba Knežević, DMD, PhD, Assistant Professor Renata Gržić, DMD, PhD, Full Professor
22.11.2024.			V 6e (8.00-8.45) Krešimirova 40	Ana Domitrović, DMD
22.11.2024.			V 6f (8.45-9.30) Krešimirova 40	Ana Domitrović, DMD
22.11.2024.	P 7 (9.30-10.15) Krešimirova 40	S 7 (10.15-11.00)		Petra Tariba Knežević, DMD, PhD, Assistant Professor Renata Gržić, DMD, PhD, Full Professor
29.11.2024.			V 7e (8.00-8.45) Krešimirova 40	Ana Domitrović, DMD
29.11.2024.			V 7f (8.45-9.30) Krešimirova 40	Ana Domitrović, DMD
29.11.2024.	P 8 (9.30-10.15) Krešimirova 40	S 8 (10.15-11.00)		Petra Tariba Knežević, DMD, PhD, Assistant Professor Renata Gržić, DMD, PhD, Full

				Professor
06.12.2024.			V 8e (8.00-8.45) Krešimirova 40	Ana Domitrović, DMD
06.12.2024.			V 8f (8.45-9.30) Krešimirova 40	Ana Domitrović, DMD
06.12.2024.	P 9 (9.30-10.15) Krešimirova 40	S 9 (10.15-11.00)		Petra Tariba Knežević, DMD, PhD, Assistant Professor Renata Gržić, DMD, PhD, Full Professor
13.12.2024.			V 9e (8.00-8.45) Krešimirova 40	Ana Domitrović, DMD
13.12.2024.			V 9f (8.45-9.30) Krešimirova 40	Ana Domitrović, DMD
13.12.2024.	P 10 (9.30-10.15) Krešimirova 40	S 10 (10.15-11.00)		Petra Tariba Knežević, DMD, PhD, Assistant Professor Renata Gržić, DMD, PhD, Full Professor
20.12.2024.			V 10e (8.00-8.45) Krešimirova 40	Ana Domitrović, DMD
20.12.2024.			V 10f (8.45-9.30) Krešimirova 40	Ana Domitrović, DMD
20.12.2024.	P 11 (9.30-10.15) Krešimirova 40	S 11 (10.15-11.00)		Petra Tariba Knežević, DMD, PhD, Assistant Professor Renata Gržić, DMD, PhD, Full Professor
10.01.2025.			V 11e (8.00-8.45) Krešimirova 40	Ana Domitrović, DMD
10.01.2025.			V 11f (8.45-9.30) Krešimirova 40	Ana Domitrović, DMD
10.01.2025.	P 12 (9.30-10.15) Krešimirova 40	S 12 (10.15-11.00)		Petra Tariba Knežević, DMD, PhD, Assistant Professor Renata Gržić, DMD, PhD, Full Professor
17.01.2025.			V 12e (8.00-8.45) Krešimirova 40	Ana Domitrović, DMD
17.01.2025.			V 12f (8.45-9.30) Krešimirova 40	Ana Domitrović, DMD
17.01.2025.	P 13 (9.30-10.15) Krešimirova 40	S 13 (10.15-11.00)		Petra Tariba Knežević, DMD, PhD, Assistant Professor Renata Gržić, DMD, PhD, Full Professor
24.01.2025.			V 13e (8.00-8.45)	Ana Domitrović, DMD

			Krešimirova 40	
24.01.2025.			V 13f (8.45-9.30) Krešimirova 40	Ana Domitrović, DMD
24.01.2025.	P 14 (9.30-10.15) Krešimirova 40	S 14 (10.15-11.00)		Petra Tariba Knežević, DMD, PhD, Assistant Professor Renata Gržić, DMD, PhD, Full Professor

List of lectures, seminars and practicals:

	LECTURES (Topics)	Teaching hours	Location/Lecture room
P1	Introduction to the definition and history of occlusion - gnathology	1	Online
P2	Functional anatomy of the stomatognathic system	1	Online
P3	Functional Anatomy tmz	1	Online
P4	Neurophysiology of the Stomatognathic System	1	Online
P5	Position of teeth and occlusion	1	Online
P6	Position and movements of the lower jaw	1	Online
P7	Registration of the position and movements of the lower jaw - hinge axis	1	Online
P8	Geometry of occlusion and concept of occlusion	1	Krešimirova 40
P9	Articulators	1	Krešimirova 40
P10	Functional disorders of the stomatognathic system	1	Krešimirova 40
P11	Clinical analysis of functional disorders of the stomatognathic system	1	Krešimirova 40
P12	Instrumental analysis of functional disorders of the stomatognathic system	1	Krešimirova 40
P13	Basics of therapy for functional disorders	1	Krešimirova 40

P14	Clinical presentations	1	Krešimirova 40
	TOTAL TEACHING HOURS		

	SEMINARS (Topics)	Teaching hours	Location/Lecture room
S1	Functions of the masticatory system	1	Krešimirova 40
S2	Determinants of occlusal morphology	1	Krešimirova 40
S3	Mechanism of orofacial pain	1	Krešimirova 40
S4	DC/TMD as dg. criterion of TMD	1	Krešimirova 40
S5	Bruxism – signs and disorder	1	Krešimirova 40
S6	Headaches	1	Krešimirova 40
S7	Orthodontic anomalies and TMD	1	Krešimirova 40
S8	Corrosive splints	1	Krešimirova 40
S9	Physical th	1	Krešimirova 40
S10	Depression and TMD	1	Krešimirova 40
S11	Parafunctions in children	1	Krešimirova 40
S12	Implantology	1	Krešimirova 40
S13	Prevention of injuries in sports	1	Krešimirova 40
	TOTAL TEACHING HOURS		

	PRACTICALS (Topics)	Teaching hours	Location/Lecture room
V1	V1 Medical History taking in TMD patients	1	Krešimirova 40
V2	Clinical examination of TMD patients	1	Krešimirova 40
V3	Radiological evaluation of TMD patients	1	Krešimirova 40
V4	Evaluation of the condition of the occlusal complex	1	Krešimirova 40
V5	Analysis of interjaw relationships - finding reference positions of the mandible	1	Krešimirova 40
V6	Analysis of the contact relationship of the teeth in the central position of the mandible	1	Krešimirova 40
V7	Analysis of occlusal relations in the intercuspidation position of the mandible	1	Krešimirova 40
V8	Analysis of occlusal relations during eccentric movements of the mandible	1	Krešimirova 40
V9	Taking impressions for studio models and casting in plaster	1	Krešimirova 40
V10	Determining the intercondylar hinge axis and molding the molded models into the articulator	1	Krešimirova 40
V11	Anterior and posterior guidance, wax registration,	1	Krešimirova 40

	condyle track adjustment, protrusion registration		
V12	Laterotrusion registration, Bennett movement and angle, articulator adjustment	1	Krešimirova 40
V13	Solving practical cases	1	Krešimirova 40
V14	Clinical case reports	1	Krešimirova 40
V15	Practical exam	1	Krešimirova 40
	TOTAL TEACHING HOURS		

	FINAL EXAM DATES
1.	13.02.2024.
2.	27.02.2024.
3.	15.06.2024.